APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/774,721	02/01/2001	Song-Bor Chen	3313-0275P-SP	3385

7590 07/08/2004	EXAMINER	
BIRCH, STEWART, KOLASCH & BIRCH, LLP	SHRADER, LAWRENCE J	
P.O. BOX 747		
Falls Church, VA 22040-0747	ART UNIT	PAPER NUMBER
	2124	

DATE MAILED: 07/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on _15 April 2004_.

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under _Ex parte Quayle_, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) _1-5_ is/are pending in the application.

   4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) _1-5_ is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

   a) ☐ All   b) ☐ Some * c) ☐ None of:

   1. ☐ Certified copies of the priority documents have been received.

   2. ☐ Certified copies of the priority documents have been received in Application No. _____.

   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
   Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413)
   Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This Office Action is in response to the amendment filed by the Applicant on

4/15/2004.

2.   Applicant's arguments with respect to claims 1 – 5 have been fully considered but

are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

4.   Claims 1 – 3, and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable

over J. B. Rosenberg, "How Debuggers Work" in view of Roth et al., U.S. Patent

5,875,294 (hereinafter referred to as Roth).

In regard to claim 1:

> *"the step of inserting an error output command, which inserts an error output
> command after any hardware device test or initialization step in the sub-routine
> of the POST program so as to output a particular value to a debug port after the
> hardware device test or initialization step;"*

Rosenberg discloses that breakpoints are inserted (page 107 last sentence) allowing a user to examine various variables or conditions, but does not specifically disclose an insertion in a subroutine. However, Roth discloses insertion of a breakpoint within a subroutine. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to combine the teaching of Rosenberg regarding the insertion of breakpoints in a program to examine various conditions, with the teaching of Roth inserting the breakpoint in a subroutine, because the insertion of the breakpoint in a module such as a subroutine allows a more efficient monitoring of a program allowing a soft stop or a hard stop if necessary as taught by Roth at column 5, lines 17 – 21 and 41 – 47.

> *"the step of selectively enabling the error output command by an operator during testing, which inserts a condition before the error output command so that the error output command is enabled to output the particular to the debug port when the condition holds."*

Rosenberg discloses conditional breakpoints that may be inserted (p. 108 last para. to p. 109 first para.), which causes a stop when a particular value is found, allowing a variable to be examined.

It is noted that an error output command in the POST reads on a breakpoint in any other program command sequence, because *The Microsoft Computer Dictionary*, Fifth Edition defines a breakpoint as being implemented by inserting at a point some kind of jump, call or trap instruction that transfers control to a debugger so that a program's status or variables might be examined.

In regard to claim 2, incorporating the rejection of claim 1:

> *"...wherein the validity of the condition is determined by setting a particular variable and detecting the value of the particular variable."*

Rosenberg discloses the detection of a variable value (p. 30, second paragraph).

In regard to claim 3, incorporating the rejection of claim 2:

> *"...further comprising the step of setting the particular variable."*

The variables in any other software system would have to be set as the program is run. Therefore, a variable would have to contain an inherent value that is set as Rosenberg discloses at p. 30, para. 2.

In regard to claim 5, incorporating the rejection of claim 1:

> *"...wherein the error output command is disabled by the operator after testing so that the error output command will not be compiled when used by the consumer."*

Rosenberg discloses a temporary breakpoint that is removed after testing, thus it is not compiled in the when used by a consumer (p. 108 top).

5.   Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over J. B. Rosenberg, "How Debuggers Work" in view of Roth et al., U.S. Patent 5,875,294 as applied to claim 1 above, and further in view of Andrews et al., U. S. Patent 6,317,871 (hereinafter referred to as Andrews).

In regard to claim 4, incorporating the rejection of claim 1:

> *"...wherein the error output command is compiled and added into the POST program only when the condition holds."*

Rosenberg discloses that breakpoints (error output commands) are inserted

allowing a user to examine various variables or conditions, but does not disclose a

conditional compilation. However, Andrews discloses a conditional compilation

wherein statements are only compiled into the final program if the condition is true

(column 2, lines 4 – 9). Therefore, it would have been obvious to one skilled in the art

at the time the invention was made to combine the use of error output commands as

taught by Rosenberg with the conditional compiling disclosed by Andrews, because the

conditional compiling feature permits the proper debugging commands to be inserted

while compiling only a specific section of code in order to debug the system as taught

by Andrews at column 2, lines 6 – 9.

Response to Arguments

6.   Applicant's arguments with respect to claims 1 – 5 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

7.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Lawrence Shrader whose telephone number is (703) 305-

8046. The examiner can normally be reached on M-F 08:00-16:30.

   If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for

the organization where this application or proceeding is assigned is (703) 746-7239.

   Any inquiry of a general nature or relating to the status of this application or

proceeding should be directed to the receptionist whose telephone number is (703) 305-

3900.

Lawrence Shrader
Examiner
Art Unit 2124

June 24, 2004

KAKALI CHAKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100